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It requires only an inspection of the accompanying map to show any inquirer or observer, not only the true sources of the Nile, especially of the White Nile, and that these cannot be to the s. of the equator, nor have any connection with Killimandjaro, nor the rivers in Kaffa and Enarea, which, with the exception of the more remote sources of the Seboth river, all run s.e. into the Indian Ocean.

Some very curious and important information connected with the countries near the sources of the Nile has just been received from a French missionary (R. P. Leon), dated at Zanzibar, August, 1858. This missionary had been in Enarea. He states that there is a frequented road from Brava on the sea-coast to Kaffa, the journey occupying 24 days. This, by native estimation, is about 15 miles daily; but they never actually travel more than 10 miles on an average. The estimated distance is 360 geo. miles, which is tolerably accurate. Twelve days' journey s. of Kaffa, he states, dwell a people called Amara, nearly, or it may be said, white. They have written books, and a language different from either the Éthiopic or Arabic. They build houses and villages, and cultivate the ground. They are rightly conjectured to be the remains of Christian nations, which in early times spread far to the s. of Abyssinia, till they were overrun, massacred, or scattered by the savage Galla. It has been repeatedly asserted that such remnants of Eastern Christian churches were scattered over this portion of Africa. Four days' journey from the Amara Mr. Leon says there is a lake from which an affluent of the White Nile is seen to flow. Mr. Leon supposes this to be the source of the Seboth, but it is more probable that it is the main stream of the Nile.

The Amara, he says, dwell between 2° and 3° n. lat., and have some tribes of copper-coloured people, who dwell near the equator, subject to them. No Mussulman can venture to enter this country.

XI.—*Journeys of Silva Porto with the Arabs from Benguela to Ibo and Mozambique through Africa.* Nov. 26th, 1852, to January 22nd, 1853, and from June 9th, 1853, to August, 1854. By JAMES MACQUEEN, Esq., F.R.G.S.

Read, June 27, 1859.

THIS Portuguese trader has, it appears from his own account, made more than one journey from Benguela into the interior—one to Cutonge, and another to a very considerable distance beyond it to the eastward. In his third and most important journey he was accompanied by some Arabs, who had come from the Zanzibar







Bight of Biafra

Princes I. 8

C. S. John

Corisco B.

Gaboon R.

St Thomas I

Ajama

R. Nazareth, Okekawai

C. Lopez &

C. S. Catherina

P.^t Pedras

Majumba⁹

longo

Loango

Kabenda

R. Zaire or Congo

R. Lelunda

Ambriz

C

S. Paul de LOAND

R. Coanz

C. Ledo §

Morro B

Quicombe

Elephant

C. Mary

C. Martha

Mossamedes or Lit. Fish B.

Port Alexander

G.^t Fish. B.

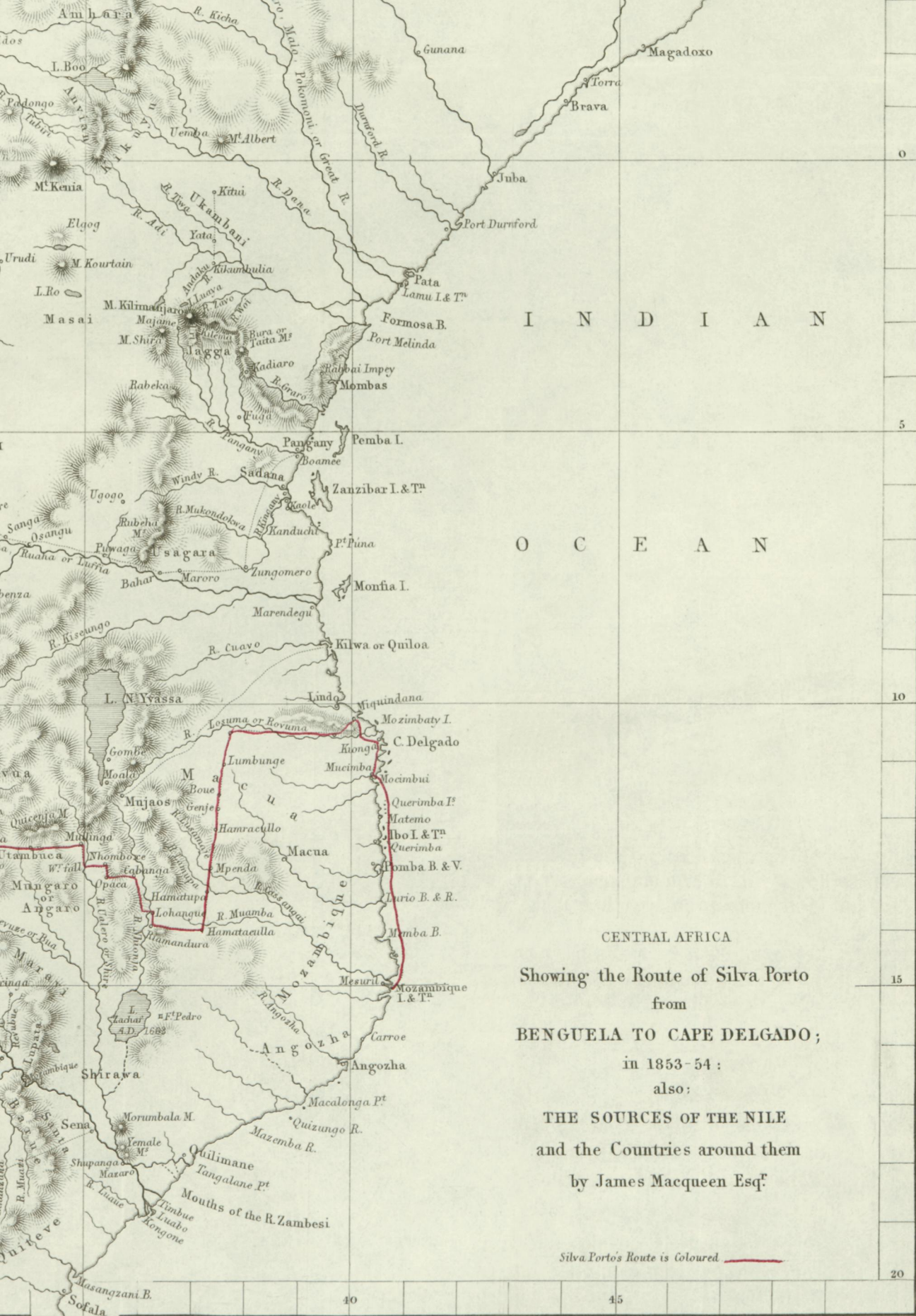
Frio

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I N D I A N

O C E A N

CENTRAL AFRICA

Showing the Route of Silva Porto
from
BENGUELA TO CAPE DELGADO;
in 1853-54:

also:
THE SOURCES OF THE NILE
and the Countries around them
by James Macqueen Esq^r

Silva Porto's Route is Coloured —

and the east coast, to Benguela in the Atlantic. With these Arabs he set out from Benguela on the 9th June, 1853, and reached Cutonge at the end of 105 days, about the 21st September. On the 22nd of that month the company under his charge left Cutonge, and, crossing the continent to Ibo, on the east coast, they thence proceeded to Mozambique, which they reached on the 12th November of the following year (1854).

The portion of the journey from Bihe, in 1852, is here properly first considered. Cutonge, mentioned by Silva Porto, and where he had a trading station, is doubtless the Kutongo of Dr. Livingstone, and thus its true position is distinctly and correctly ascertained. At this place Dr. Livingstone tells us a Portuguese trader from the west coast had a trading factory at the time he first went up a portion of the Leeambaye. Boa Vista seems to be the capital of Bihe, for it is here that an accredited Portuguese agent from Loando resides, though Coquema also seems to be similarly situated. It is but one day's journey distant from the former place to the southward.

Silva Porto started from Boa Vista on the 26th November, 1852. In this, and in his other journeys, he was supplied with a considerable quantity of goods by his government for presents to the different chiefs that lay in his way. At the end of the first day's journey he reached the River Coquema (a tributary to the Coanza) near its source. Keeping near it, he crossed it on the second day, 64 feet broad. It was then near the end of the dry season. The direction of his journey was east. He crossed the Coanza at a distance of two days' journey from its source. At the point where he crossed it was 4 fathoms (24 feet) broad, but deep. In his way from the Coquema, he crossed first the River Cunde, 30 fathoms broad; next the Quisulongo, 3 fathoms broad,—both affluents of the Coquema; and lastly the Cutupe, 5 fathoms broad, and an affluent of the Coanza. On the left bank of the Cutupe and a little to the north-east of his route, is the capital of the state of Quiengo, one of the most considerable states in these parts, as it stretches north-eastward to a considerable distance beyond the Coanza.

Soon after crossing the Coanza the river Hicabere is crossed, 12 feet broad; next the Lumbuambua, 18 feet broad. Both these rivers are affluents of the Coanza, and come from the east, or rather south-east. The latter river forms a considerable lake in the midst, at that time thickly covered with beautiful aquatic plants and flowers, which gave forth a most delicious perfume. At the end of two days' journey from the Coanza Silva Porto crossed the waterparting, and came upon the head of the river Cubulai, which bends its course eastward, 18 feet broad where crossed, and joined by the river Munhona, from the westward, 18 feet broad

where crossed. The united streams join the river Cuito de Zam-bueria near the capital of the chief Accumco. The prospect near the junction of the rivers is exceedingly picturesque. Four great and high mountains appear at some distance to the northward, apparently about $1\frac{1}{2}$ mile distant from each other, and one other equally high at a greater distance, but isolated from the others. Through the former mountains descends the river Cuito, which where crossed was 72 feet broad, and so deep as to require canoes. The country westward is studded with gently rising ridges. On the west side of the Coanza the features of the land are the same. Brushwood is in many places abundant and troublesome. In some places trees are found, but in other parts there are none. The country is everywhere intersected with rivulets, and is also fertile and productive. The river Coquema separates the state of the Biheans from the Ganguellas, a people who, as we shall presently see, hold a great extent of country to the eastward.

The river Cuito joins to the southward the great river Cubango, which rises in Nanno, to the westward of Bihe, and, flowing south-eastward, is certainly the parent stream of the Chobe, a large affluent of the Leambaye or Riambeje. Pursuing his course east, for nearly three days, Silva Porto next turned during two days nearly south, passing in this distance the river Loaputo, 12 feet broad; the Muzire; the Coandere, 72 feet broad; the Chaumette, 12 feet; and next the Cuenti. All these streams are tributaries to the Cuito. Renewing his easterly course, Silva Porto, in the course of five or six days' journey, crossed the river Lupire, 24 feet broad; the Cumsha, 24 feet broad; the Coue, 18 feet broad; and next reached the junction of the river Caimbo, 42 feet broad, with the river Cuanda (Quando), 48 feet broad, the rivers, when united, forming a stream 90 feet broad; the three first rivers are affluents of the Cuanda, which is again joined by the river Cuti, 24 feet broad, and their united streams run to the river Riambege or Leambaye. Most of these rivers are deep, though none require canoes to cross them. The country is generally plain and fertile, but about the river Caimbo the country is so thickly covered with close brushwood that it is almost uninhabited. Honey is very abundant in this part as well as in other places. On the right bank of the Caimbo is the country of Buamungo, governed by Soba Caleda, a chief of considerable importance. Next to this is the small place called Mueza. The river Cute terminates the people called Ganguellas, and who, in these parts, are terribly annoyed by the fierce tribes of Ganguellas of the north called Cangela, Canga, and Quitembo.

The united streams of the Caimbo, Cuanda, and Cuti, are most probably the river called Longa by Dr. Livingstone. The chief of the country of Cute, so called after the river, is subordinate to a soba or chief residing at Mueze: Mutembe, or rather Mutimbe, who

is the sovereign of the whole district. Continuing his course east from the Cuti, Silva Porto reached the banks of the river Nenda, having passed in his way during a journey of three days two small rivers, the Hiculai and Halenga, affluents certainly of the Leambaye. These again are probably affluents of the Kama of Livingstone. At this part of his journey the narrative that has come into my hands breaks off abruptly, but there can be no doubt that he was then close upon the Leambaye, and probably the river Nenda was the western branch of that river where it forms the island of the Barotze valley. In his subsequent and most important journey he goes into no detail of his journey from Benguela to Bihe, considering, no doubt, that he had already made that portion of Africa sufficiently well known, but, as we shall see presently, he starts at once from Cutonge in his journey to the east coast. The country of Cuti formerly formed part of the state of Luy, but the Maccacottos (Makollolos, Livingstone) have thrown off the yoke, and got possession of part of it on both sides of the Leambaye. It must be observed that this journey of Silva Porto's was undertaken in the midst of, and towards the close of, the dry season, which accounts for the state of the rivers which he passed being so low; but he tells us that, in the rains, they inundate the whole country, especially in the country of Cuti, where the houses of the population are raised a considerable height above the ground to preserve them from the floods, as also places raised in the same manner in order to preserve their provisions and food from the effects of the great damp that prevails during the rains. Still the floods are at times so violent that both houses and people are swept away. An inspection of the map will show that there is a large and sufficient distance from the route delineated that was taken by Graça to the Cassabe to give room sufficient to produce very large rivers, especially during the rains. The land to the northward is very elevated and cold, both rivers and lakes in these parts being completely frozen over, and snow is seen on the mountains when the rains become strong in July and August. When Silva passed, the country west of the Cute was destitute of water, or only to be had in large holes, the remains of the rains. Betwixt the Cute and the Neuda the population was thinly scattered over the country.

The next journey by Silva Porto is the most important. He starts at once in his published narrative from Cutonge, the Kutongo of Dr. Livingstone. This position is correctly fixed, and is consequently of great importance. It stands in $15^{\circ} 17'$ s. lat., and $23^{\circ} 24'$ E. long. During the first two days his course was to the south, passing on the second day the river Nambuete. This river is mentioned in the itinerary given by the Arabs who were his companions on the occasion, as we perceive that both itineraries

start from Cutonge, or Kutongo, on the 22nd September, 1853. They passed this river at the ford near one lake 90 feet broad. This journey, be it observed, took place in the spring or driest season of the year. At the end of the second day the course was afterwards east; but as Ibo, on the eastern coast, was looked to as the end of their journey, the course as far as Camimbe may be taken to be east by north. To Camimbe the days' journeys were, with a few exceptions, exactly the same. Silva allows a time equal to that of three miles on account of detentions in passing rivers. The country travelled over was generally plain, and, the season being dry, they had no detentions from rains or floods. In some places there was much brushwood, in some places very large trees, and in other parts trees were wanting. The land was represented as everywhere fertile, and the drought very great. Up to the river Loengue, Silva does not give us the length and breadth of the rivers, which is much to be regretted, simply observing, in reference to his former journeys, regarding each as "already known."

From the commencement of his course east, on the third day of his march, he crossed first the river Liamutenga, at the ford 12 feet broad, and here he gives us an important account of the difference in the magnitude of tropical rivers in the dry as contrasted with the rainy season. In his former journey, which was made in the rainy season, this river was 180 feet (30 fs.) broad. Here we have a ready explanation of the difference in the magnitude of African tropical lakes and rivers as these appear to, and are given by, travellers, without telling us the season of the year when these were visited, seen, and crossed by them. This point, steadily considered, will account for many errors and apparent discrepancies which have baffled and misled inquirers and geographers in every place. Continuing his journey, he encamped on the north side of the lake Hibeno, situated in the country of Luys. Next day he crossed in canoes the river Lui. Dr. Livingstone mentions the valley and state of Lui, Loe, or Milua, at some distance to the eastward of Kutongo. He next day passed the river of Mattendo in canoes. This place is stated in the Arab itinerary. Next he crossed the river Hamengoena, where the country of the people called Guette begins. Farther eastward two days he crossed the river Jonga in canoes. This is doubtless the river Njoke of Livingstone. He next crossed the river Caxeke. In two days more he crossed the river Loamba at the ford. In the journey they felt the want of water, which is only occasionally found in deep holes, and at other times only $1\frac{1}{2}$ feet deep. Here ends the country of the Guette. Continuing his journey, he, on the third day, crossed the river Cangalla at the ford. Water was very scarce in this distance, and the country very thinly peopled.

From hence to the territory of Cunhinga ridges were frequent. Continuing the journey eastward, he crossed the river Mangoaxe near a great waterfall; water in the way still scarce. Next day he came to the right bank of the river Loengue, Loenge of Livingstone, where the territory of Soba Cahinga begins. Here he visited the chief, and was well received, and readily obtained guides to conduct him and his party to the boundary of his territory to the east. Silva then crossed the Loengue in canoes. It was, he says, the first time he crossed it, and he here corrects an error that he had made in his former journey by wrong information, namely, that the Loengue ran to the sea, but which, he says, he now ascertained from the natives was not the case, but that it was a tributary to the Riambeje. Continuing the journey eastward, he, on the third day, reached Camimbe, where the dominion of the chief of Cahinga terminates. In this distance water was found, the land throughout plain and fertile. From this point the course was changed to the north, and at the end of the fourth day they encamped in a place name unknown, having passed Nhécimo, and Abotte, and on the second day, going north, they crossed the river Cassongae at a ford, marching to the termination of that day's journey along its right bank.

The whole time occupied in travelling to this point was 38 days, of which 11 days were occupied in stoppages, and principally in purchasing provisions. The estimated distance travelled from Kutongo was first south 9 leagues, and then east 162 leagues to Camimbe, and from thence north 30 leagues. These distances would, at 2 geographical miles per league, bring Camimbe to $15^{\circ} 8'$ s. lat., and $27^{\circ} 38'$ E. long.; and Loengue to 15° lat. s., and $26^{\circ} 40'$ long. E. River Loengue only about 60 miles distant from the point where Dr. Livingstone reached it, or rather his Kafue.

The country through which they passed is described as fertile plain and generally clear, so that travelling was not difficult, while the weather was constantly dry. In some few parts trees of an enormous size were met with, and in the decayed trunks of some of these excellent water was occasionally found. In the parts most to the eastward a great number of hogs were discovered roaming, and whose flesh afforded a seasonable supply of excellent food to the traveller, who sometimes had little else to depend upon. They were of two species; one, the mountain hog, the smallest, called by the natives Glube; the other, the hog of the plains, called Gime. The food of the former is seeds and roots, and that of the latter ants and reptiles. Honey was also in those places very abundant, and, as a matter of course, wax was plentiful.

The Ohcoinga of the Arab narrative is no doubt the Cahinga of Silva Porto, at which state, close to the great town of Chamopa,

there was, according to the former authority, a great river, called Chamboriro (corruption of the name Zambeze), *more* than 100 fathoms broad, very deep, and running to the south. This is clearly the river Loengue of Porto. They state it to be half-way between the west and the east coast. Its magnitude corresponds well. But this proof of its being so is scarcely necessary in face of the clear narrative of Porto. Returning for a moment to Camimbe, the course pursued for 13 days by Porto was due north to Camossango, lat. 12° s., long. $27^{\circ} 38'$ E. On the beginning of the sixth day they crossed the Loengue the second time in canoes, the stream there running from east to west. On the morning of the twelfth day they reached the capital of Soba Gaue, on the right margin of the Loengue. Next morning they crossed the Loengue for the third time in canoes, and proceeded by its left bank to Camossango. They passed on their way, beyond Nhoca, first, the small river Hepe; second, the lake Baba Aihava; and third, the river Seamara, four fathoms broad. Lake Baba Aihava is about 1 mile in extent. The country everywhere is represented as fertile, and generally without trees, except about the lakes and the rivers.

From Camossango they pursued their way east to Quicema, a short distance from the Roango or Arroango of the north: the journey to this place occupied 34 days, 3 days of which were occupied in deviations to the south from the general eastern route—the first at Couxito, and the latter at Loquera. During the early portion of the journey they passed two small rivers running to the Loengue, and at the distance of 145 miles east of that river they came to the river Callumbange, 8 fathoms broad. This river rises in the northern portion of the great Muchinga range, and is a tributary to the Roango or Arroango. At about half-way between the Callumbange and the Loengue the country, especially to the north, first becomes hilly, and then rises into high mountains. At Lumbue the territory of Biça Babiça, or Movizas, commences, and terminates near Quicema. It stretches 15 days' journey from east to west, and as much from north to south. In this portion of their journey they passed the considerable states of Ballunda and Iralla, both lying to the south. The people of the states of Luy and Biça are mixed with the original natives of the western parts of Biça. There are two ways or roads from Biça to the eastern coast, and a party of traders from this nation joined Porto's company to proceed to the east coast. Up to the 25th November the weather had been dry, but on that day a considerable fall of rain took place in the journey between Couxito and Longoma.

Pursuing their journey from the Callumbange to the east, they crossed the river Loanguinga, 5 fathoms broad, rising also in the

great Muchinga chain, and carrying its waters southward to the Roango. Next, and at a distance of 70 miles from the Roango, they crossed the river Bissombo, 8 fathoms broad, and soon after the Lunde, 4 fathoms, both coming from the cordillera of the Muchinga chain, and paying tribute to the Roango. At the Bissombo they reached the first culminating point of the cordillera Muchinga, and 20 miles farther east they came to the second culminating point, namely, the majestic Sierra Ueenda, which they crossed. The view from the summit, Porto says, was the most interesting and beautiful he ever beheld or that could be imagined, so grand that he spent a whole day in admiring it. Descending the mountain, they came to and crossed the river Lumbungo, 15 fathoms broad, coming from the great Muchinga chain, and paying tribute to the Roango. Soon afterwards they reached Quicema, whence, bending their course south, about 20 miles, they reached the right bank of the Arroango. It was now the beginning of February, and a considerable quantity of rain had fallen, which had swollen the rivers in those parts much beyond their dry season magnitude. On the 24th January Porto's party was joined by a large company under Major Hicuça, a trader who was about to proceed to a place named Huerua, in the dominions of the sovereign of Zanzibar. The country is described as fertile, but generally with a scanty supply of trees. Wild animals and game were abundant, and elephants particularly numerous around the banks of the Arroango. Rivulets were everywhere numerous. Provisions readily to be had, and the chiefs and people easily reconciled and friendly. The lands of Biça terminate at Quicema. Between Quicema and Cabandangollo, at the side of the Roango, they passed a lake, but did not hear its name.

At Cabandangollo they crossed the Roango, here 15 fathoms broad, in canoes. It runs to the Riambeje, Leambaye, or Zambeze.* At the point where crossed begins the territory of Cunda. Pursuing their way east during 13 days, 166 miles, they passed the capitals of Cunda and Utumbuca, and came to Mutenga. To the westward of Utumbuca (capital) they came to a very remarkable mountain of granite, called Quicinja, by the side of which flowed to the southward a small rivulet, a tributary, as it must be, to the river Bua. About halfway between the capital of Cunda and the capital of Utumbuca, and at some distance to the

* The point where they crossed the river (say $12^{\circ} 30'$ s. lat., and 32° E. long.) is clearly marked in the abstract journal kept by the Arabs, namely, at the river Muata. Now, Gamitto (p. 415) tells us that Muata is a rivulet that bounds the small Portuguese territory of Macambo on the south; and at p. 407 he informs us that Macambo is a small territory belonging specially to the Portuguese, near Mavazamba, and bounded N.W. by the Arroango. The position of this place is therefore accurately fixed, and, being so, forms a clear point which enables us to determine other routes and distances.

north, is a very mountainous country. North from Quicença rivulets were everywhere abundant. It was now the month of March, and rains were heavy and frequent, so as to interrupt travelling even for days together. From Mullinga they marched south one day, and came to the river Ualero on its right bank. At this point the dominions of Soba Utumbuca terminate. There they crossed the river Ualero by a tree-bridge 20 fathoms in extent, and at a great waterfall. In passing the stream two negroes, natives of Biça, tumbled off the slippery bridge and were drowned. The river Ualero is a tributary to the great river Nhionja. At about 30 miles east of the Ualero they reached Nhombuxe. The country was full of rivulets. From Nhombuxe their course diverged to the south two days, passing Comasa and Opaca, and thence east by Guaxe, about 45 miles to Cabanga. At Guaxe they had a good deal of fighting with the barbarous and hostile chief of that place. A few people on each side were killed. The Guaxian loss (65) was by far the most numerous. At length they beat the chief and proceeded on their way. Here there is some darkness in the journal, otherwise well kept. They were occupied in those broils nine days, and he speaks of four days being occupied in passing through these dangerous and hostile latitudes; but whether he means that these four days were in the territory of the Soba of Guaxe, and the extent of his dominions, I cannot exactly make out; but should it be so, as it probably is, then 40 more must be added as it has been to the position of Cabanga to the eastward.

From Cabanga their course again deviated about 40 miles to the south, when they reached the right bank of the river Nhionja; here on the 29th April, the height of the rainy season, *one* mile broad. They crossed this river in canoes, and proceeded east about 8 miles to Lohengue. The river, Porto says, discharges itself into the sea, directing its course from this point through the country of Inhumbanj. It is no doubt the river known as the Chire, augmented by the waters of the Suaba (the latter perhaps the real Nhionja), which enters the Zambeze about 30 miles below Sena. Gamitto, and other Portuguese authorities, expressly state that the Nhanja or Nhionja and the Shire are one and the same river. This river Shire or Chire, the Portuguese say, can be navigated upwards by boats for 30 days. The magnitude of the Nhionja, as given by Porto, must be taken with reference to the season of the year—the very height of the rainy season. What it may be in the dry season may be estimated by considering what Porto has stated about the difference of the magnitude of the Liumutenga in the wet and in the dry season, that is, 30 fathoms in the former and only 2 in the latter—a reduction 15 to 1. Take the Nhionja at the same proportion, and we should have a river 340 feet broad, being still a large stream for the dry season of the year, and which would

require the distance from the point under consideration to the high lands to the south of the lake Marave or Nyassa to form such a stream. At Lohangue the company parted, Major Hieuça and his Biça company taking their way hence to the country of Huerua above mentioned. On the banks of the Nhionja large quantities of fine salt are manufactured and refined; travellers come from a great distance to buy the same. Up to this point the land passed over from the Roango is generally plain, fertile, with plenty of rivulets, and plenty of wild and tame animals, especially elephants. At Cabanga they manufacture good cloth from cotton, both for use and sale. Trees are scanty everywhere, but brushwood is extensive in many parts. From the Ualero, and through the dominions of Saba Quipala, by Opaca, &c., the country is all mountainous.

At Lohangue Porto endeavoured to obtain a guide to conduct him to the sea-coast. He was offered a negro who had escaped from slavery in Mozambique. But the negro himself properly declined the appointment. At last the chief supplied him with one of his subjects to conduct him to another chief at Riamandura, one day's journey distant. Around this latter place the country was mountainous and fertile, but without trees. At Riamandura he considered himself at no great distance from Mozambique, and thought of pursuing the way to Querua, on the sea-coast; but he could not obtain a guide, the chief putting him off from day to day with frivolous excuses. At last, wearied with his detention at this place from the 1st of May to the 6th of June, he arranged with a company of salt-merchants to proceed with them to the country for which the salt was intended. From Riamandura they proceeded due east during five days (45 miles) to Hamataculla, having passed in their way, at one day's journey separate, the small states of Lombullo, Borullo, Maxito, and Quipembe; the country plain and fertile, with abundance of rivulets, and a good deal of brushwood. From Hamataculla they turned north, in which direction they travelled four days (40 miles) to Hamatapa, having in their way passed, amongst other places, Lussue. On the first day's march in this direction they passed the river Muamba, 5 fathoms broad, and encamped on its right bank, and which runs to join the river Cassengue. On the second day they crossed the road which ran from the interior to Quiçanga, situated on the sea-coast not far from the island of Ibo. Having satisfactorily arranged matters with the salt-merchants for their guidance, he went with them to their towns, situated on the north side of the river Lamupa. After some negotiations with the chief, he obtained guides to conduct him to Mapembe, two days' journey distant on the road he had to go. The country through which they passed in the direction mentioned is described as plain and fertile,

with a good deal of brushwood and abundance of rivulets. It was now approaching the end of June, when the rains may be considered to be over, which shows that these rivulets must be formed from other and more permanent sources of supply than from the rains.

From Hamatapa, Porto continued his journey north for 14 days; crossing on the second day the river Lunupa, 17 fathoms broad, and the river Leesemage, 12 fathoms, and, at the close of the time mentioned, he came to the right bank of the river Losuma, here 1 mile broad at a ford (20th July), passing the residences of the different chiefs, as marked in the map. One day beyond the Lunupa he came to the capital of Mapenda. The country of this name extends north six days' journey; the people of Mapenda were exactly like the population of Loando. Near the Lunupa the country was mountainous. Throughout all this particular route the country was fertile, with abundance of rivulets, and also a good deal of close brushwood; the land was all plain. From the point in the river Losuma or Rovuma, above mentioned, Porto proceeded east seven days (say 77 miles), crossing on the third day from the right bank to the left bank of the Losuma, but, quitting the side of the river on the sixth day, he again took a northerly direction, and at the end of four days (say 40 miles) he came to the sea on the east coast of Africa. The point where he reached the sea-coast must have been a little to the north of Cape Delgado, and in the district of Mangando, or Miquimdame, the country to which, he says, on his first reaching the Losuma, that river ran into the sea. From this point he marched along the sea-coast seven days, travelling, with little interruption, from the dawn of day to six or seven o'clock in the evening, a distance of at least 80 miles. On the third day in this route he crossed the Losuma in canoes, then (8th of August) 1 mile broad, in the rainy season it may be double, and slept in the country of Hionga. We may here observe that, on the first day when he turned in his last northerly route, he crossed a cordillera, the third culminating point he had found in the eastern portion of Africa which he had traversed. He was now amongst an Arab population, who were hospitable and kind. At the end of seven days he embarked in a boat with oars, supplied by an Arab lady, and on the 4th day he landed in the flourishing Portuguese settlement of Ibo. The point where he embarked must have been Muzimbua or Mucimbue, situated on the sea-coast in $11^{\circ} 19' \text{ S. lat.}$, and $40^{\circ} 19' \text{ E. long.}$, that town being the last place mentioned in the Arab journal before reaching Ibo. In all his last eastern route the country was plain, in some parts woody, and in others covered with prickly brushwood. During the last four days' northing, the country was without water. The country everywhere abounded with all tropical

productions, including sugar-cane; the population, though barbarous, showed a good deal of attention to agriculture. The Macuas are a ferocious race, but he says the people of Maconda are more like wild beasts than human creatures. The chiefs everywhere are engaged in constant quarrels, but in general encourage commerce, from which, by fair means or foul, they obtain their only, yet miserable, revenue. Porto seems to have bent his later course for Mozambique, but at Riamandura he was forced to turn aside from that direction, and subsequently to proceed on his way according to the nature of the country, and as the pleasure of the chiefs and people would permit him.

At Ibo he was well received. There is something touching in his simple and affecting prayer of thanks to Almighty God for his protection throughout his very long and perilous journey. Long and perilous it certainly was. He left Benguela on the 9th of June, 1853, with the Arabs that had come from Zanzibar, accompanied by a considerable number of servants and attendants. In his journey he was joined by more than one large caravan of traders. On the 23rd of August, 1854, he reached Ibo, having of that time spent 190 days in actual travelling, 139 or 144 days of which were in the direction of east. A large portion of this time in his travels was during the rainy season, when the land was in many places inundated, the rivers flooded, and every rivulet become a considerable river. From Ibo Porto went in a small boat with oars by sea in eight days to Mozambique, which place he reached on the 8th of September in the same year. There he some time after embarked in the Portuguese frigate at Fernando, which, after a good voyage, landed him at Benguela; and on the 11th of April, 1856, we find him dating his general journal from Bihe; thus including his very curious and important journey and his journal, which has been exceedingly well and correctly kept, more so than most journals of African travellers that through fifty years of research into the geography of Africa have come in my way. The breadth of Africa, from Benguela to Mucimbe on the east coast, is 1578 geo. miles. The distance travelled in 144 days gives nearly 11 geo. miles made good daily in the direct line, more than half of the distance having been gone over in the dry season of the year. His accounts of the manners and customs of the different tribes, their religion, the productions of the soil, the number and the magnitude of the rivers, and the physical features of the country through which he passed, are correctly and minutely stated, and are thus very interesting.

In taking a general survey of Africa it is at once evident and undeniable that the Portuguese possessions or dominions in Southern Africa are the most valuable and most important and useful portion of that vast and hitherto neglected continent.

Extending along the east coast 1000 geo. miles, and along the west coast 700, they command the entrance into every part of the interior, well known to be comparatively healthy, and all fertile, capable of producing every article of agricultural produce that is known in the tropical world. Their claim also to most of the interior is preferable and well known. More than one river, especially the Zambeze, opens up to some distance a communication with countries in the interior more remote. It is also in many places very populous, but these people are generally engaged in internal wars. The greatest misfortune that ever befel Portugal was the withdrawal of her attention from Africa to the Brazils, and the removing of such multitudes of her population from the former to the latter. In Africa itself her population can be best and most profitably employed, and that employment only can regenerate Africa, and raise her to wealth, independence, and civilization, so as to become useful to herself and to the rest of the world. The ablest Portuguese statesmen now clearly understand this truth, and their exertions will shortly produce in Southern Africa as great a revolution in the commerce of the world as the discovery of the Cape of Good Hope did soon after it was made.

It is rather a singular fact that scarcely any of the great African rivers have their navigation unobstructed. The Nile cannot be navigated throughout its great length of 3000 miles: for more than 1500 miles of its middle course it cannot be safely navigated. The Zambeze is not navigable in its upper course, and has even some most serious obstructions in its lower. On both coasts nearly all the rivers have their mouths blocked up by sandbanks and stones. The great Orange river, after a course of more than 1000 miles, enters the sea a diminutive stream. The Cunene is completely blocked up at its mouth by sandbanks. The Coanza is only navigable for a short distance, and this for very small vessels. The Zaire or Congo has a wide and deep mouth, but at a distance of 100 miles from the sea it descends over tremendous, impassable, and terrible cataracts and rapids. The Niger appears to be the most open of the whole through its long course of nearly 2000 miles, but from Boussa * upwards for a considerable distance (perhaps 400 miles) there is good reason to believe that there are obstructions and dangers in the stream that will render the navigation thereof unsafe for vessels of any considerable burthen. The Senegal is only navigable for about 250 miles, and is on the whole a small stream. The mouths of the Luffia, the Juba, and the

* Below Boussa Clapperton emphatically tells us, that, from actual examination, the Niger is not navigable, by reason of rocks and a cataract; and Lander assures us that even during the flood the river above Boussa is dangerous to navigate, even with canoes, on account of the sunk rocks, and ledges of rocks scarcely covered with water.

Dana, on the east coast, are all obstructed at their mouths or in the lower parts of their course, and can never afford much assistance to reach the more populous and fertile districts in the interior. It is also worthy of observation, that in most parts of the interior, particularly in the southern portion of the continent, we find the rivers running through a table-land, narrow and sluggish, but deep, and then descending over rapids and cataracts to join their collected and concentrated outlets to the ocean nearer or more remote from their sources.

APPENDIX.

It is of some importance to advert more specifically to some of the tribes and nations mentioned by Porto in his journey through this portion of Southern Africa. Let us consider the following. The Biça, or Babaça, is only another name for the Movizas or Muizas. The country extends, according to Porto, fifteen days' journey from east to west, and the same number from north to south. In this estimate he is very near the truth, as it is nearly the same extent as that given by Lacerda, Monteiro, &c. There is not, says Porto, such another people as the Biça on the face of the globe. He states them to be barbarous and indolent, but nevertheless he calls them a good people, and adds that they are very hospitable. Their country, in the southern portion, is well cultivated, and produces abundantly every tropical production—grains, and fruits, and vegetables fit for the food of man. Their country to the north is plain and open, commanding most extensive prospects. But all this portion of it, from the Upper Zambeze, the boundary, to the north-west, has been nearly desolated by the Arundas, Muembas, or Moluanas, their bitter and barbarous foes, in consequence of which the population is scanty and food scarce, and famines frequent and destructive. This both Lacerda and Monteiro found to their cost. The high Sierras or mountains in the south afford them some protection against their savage foes, and here their cultivation is good, and industry considerable, with many towns, and a denser population. They have plenty of wild and tame animals, both feathered and four-footed. Their towns and dwellings are similar to those in the interior of Angola. Their dwellings, especially in the northern parts of the country, are isolated from each other, and also found at a distance from large towns. They are great traders, and go to the east coast, and also to distant places in the interior. Polygamy is the rule amongst them. They manufacture strong cotton cloth from cotton grown in the country, and make it into garments, called *tanga* in Angola, a kind of robe that covers them from above the loins to the knees. Their towns are built similar to those in the interior of Angola, but with this difference, that the former are always surrounded by a wall. Porto speaks of them as extending towards the Luvar or Luval Levale, and as if they were a similar race, which they probably are. The Levale are called also the Bianos, and their country is very extensive. The Biça or Muiza are much mixed with the Luy, Balonda (the Londa), and other neighbouring tribes. The whole southern portion of the Moviza country is covered with immense mountains, and thickly intersected by numerous streams and rivers. The great Cordilera Muxenga or Muchinga is situated in their country.

The exact position and extent of Luvar, and places immediately adjacent, are difficult to make out very correctly. The confusion in names of places, and different names being given by different travellers to the same places, renders

the correct analysis of them and the respective countries objects of considerable difficulty. But in Luvar and places adjacent are clearly the points of elevated lands which divide the waters that flow in Southern Africa to the south into the Leambaye, and to the north and north-east into the Cassabe, the Lualaba, and the Luapula. Therefore it becomes necessary to ascertain the points in question with as much precision as possible. Luvar, according to the best Portuguese authorities, lies south-west from Cazembe and the capital of Cazembe. The Arabs who crossed the continent in their journey to the west coast went from Cazembe to Catanga, to Cahava, Macacoma, Cabita, Bunda, the Coanza, Bihe, &c. Between Cahava and the towns of Cabita, they say ('Boletim e Annaes,' No. 22, p. 240), runs the great river Leambaye. But in the account of their journey first received from Benguela, it is said that they went from Cahava by the Musocma road, and that thence to Cabita they travelled along the banks of the Leambaye a good way. At Catanga they met with Major Coimbra and his traders from Bihe, and went forward in company with him. They passed through the towns or countries of Cabita, Bunda, and thence to the Coanza. Bunda comprehends the country west of Libeli, and north of the countries near the source of the Coanza to the high lands of Quiboca, or Quuios. The Hungarian officer Ladislaus (Geog. Journal, vol. xxiv. p. 272) travelled from the sources of the Coanza, first east, then diagonally to the north-east, to Yah Quitem, on the banks of the Cassabe. At Khandal, in the country of Kahenda, long. $23^{\circ} 43'$ E., he mentions particularly a branch of the great river Liambege or Leambaye, the rivers Lugebungo, Luana, Lentembo, Lumege, Luma, and Quissamange; the rivers Latembwa and Quissamange are well noticed by Dr. Livingstone; and the Lumege is equally well marked by Graça (No. 10, p. 120). These rivers just mentioned, Ladislaus tells us, flow through the kingdoms of Luvar and Kitui, and are lost in the unknown distance, or, as we know, in the Leambaye. He fell in with Major Coimbra, a Portuguese traveller, who came with him to Quissamba, in the country of Bunda. Graça (No. 10, p. 125) tells us that Quissamba is the town of the Muata, in the kingdom of Quibuica. According to Graça (No. 10, p. 124) Quinhama is on the banks of the Cassabe, one day beyond Catende Mucanza. Quinhama, we also learn, is in Lewin. Pedro tells us ('Annaes Maritimo,' No. 9, p. 430) that Quinhama and Muchinga are not far from the river Lubire, or place Quibure, which is in the land of Cumungo, a state nearer the river Amcula, where Pedro met ambassadors coming from Cabuita Cassenda, in Mahaniso, and with whom he forwarded charts to go to Tete, as he did also at the river Murucuruxy, by some messengers coming from Luvar, on the westward, for the capital of Cazembe.

The truth seems to be that the country named Luvar, Loval, or Lobale, was in former times more extensive than it is found to be at the present time. Such changes are quite common in every part of Africa. In 'Ann. Marit.,' No. 4 of 1833, p. 239, and No. 6 of 1844, p. 159, we read that, in 1795, Silva Alexandre da Texeira, a native of Santarem, in Portugal, went from Benguela to Luval, going by Bihe, the Coanza, &c. The western boundary of the state he says then began at the head of the river Luana (Loena). It was then 60 leagues long by 10 leagues in breadth. In the middle of the state was the capital of Sova Quinhama, the name of the capital, the Sova or chief's name being Luillhame. This chief dwelt, it is stated, to the west of the great river Riambeje (the Leambaye). On the right side the state had Amboellas and Camungo, on its left the great state of the Moluas, in its front Luy, and in its rear Quiboque and Bunda. Graça has told us distinctly where Queboque (Quicoe) and Bunda are, and also Quinhama, the capital of a state situated on the Cassabe.

Silva Porto shows us where Luy and Amboellas are about, and to the north of 15° S. lat.; and Graça ('Boletim e Annaes do Conselho Ultramarino,' No. 10,

p. 122) tells us that the river Luaxe is the termination westward of the kingdom of Cabita Catema, and that this state stands in the midst or centre of the lands of Bamba, Bunda, Ohegy, Muningo, Loena, and Cassaby; also that Queoco is in the kingdom of Cabita Catema. Further, that Quinhama is on the Cassabe (east side), 8 leagues beyond Catende Mucanza. Pedro speaks of Quinhama in conjunction with the state of Muchenga, probably also his Moxico. Graça, in his enumeration of the provinces of Muata Yanvo, gives us thus: Luvar, Saeumbuge, Quiboco, Cabenze, Chavahua (can this be the Cahava of the Arabs?—most probably it is, and Saeumbuge the Chaumbuge of Pedro), Dofundo, &c.

Pedro Baptista tells us ('Ann. Maritim.,' No. 9, p. 424, of 1843) that he crossed the Cassabe, and next the Luatele, at Xacahunge, and (in No. 6, p. 237) the station Chaanbuge, a day's journey from Luibaiea, perhaps Quiboieo. In the same number (239) he tells us that his master, Honorate da Costa, had, in 1797, communications with the chiefs of Bumba and Mujumba Acalunga,* ruler of all the lands of Sango, under the Jaga of Cassange, in order to induce them to use their authority (Cassange) with the chief of Luvar to permit their united slaves or traders to pass through his country on their way to Cazembe, Tete, &c. This Da Costa hoped to accomplish, through the friendship that then existed, by marriage, between the chief of Cassange and the Sova of Luvar. And he finally did accomplish this object. Bamba is also a point of considerable importance to ascertain, because Pedro, in his interesting journey, specifically mentions it as one day's journey east of the river Coango, on his return. This place, Viscount Sa da Bandeira tells us ('Ann. Maritim.,'), is a good place for a colony, because of its salubrity. Pedro took eight days from his starting-point, the fair of Carmo Quiribe, in Cassange, to reach Bamba; thence he was twenty days to Moxico; from Moxico to Catende he took eight days, which state, he says, is a little kingdom subject to the Great Morapo, or Morapue, or Molua. From Catende he was three days to Chaanbuge, and thence two days to Lubaiea.

Dr. Livingstone places the Balebale, Lovale, or Luvar, to the west of the Leona, &c., which shows that the territory of the Lovale was contracted in our time, and the territory of the Muropea, or Muata Yanvo, extended more to the westward than it was in the days of Pedro; and about sixty years ago Silva Porto tells us that Luvar extended to the Bica, along by, and intermixed with, the states of Lunda or Muata Yanvo. All these points and facts considered will enable us to fix the positions of Muata Yanvo, Luvar, the Riambege (Leambaye), and the Cassabe with considerable accuracy.

Still Bamba is a point difficult to fix, but probably lies to the north and north-east of Cassange. Colexinga is the ancient country of Queen Xinga, a portion of the tribes of Cassange, &c. Secula Bamba is eight days from Bamba, one day east of the Coango (see 'Ann. Maritim.,' No. 9, of 1843, p. 125), and twenty-two days from the fair of Mucary, which is in a district of the presidency of Ambaca, a few hours' journey to the south of that place, and to the east of the river Lucalla. In the road, at the end of ten days, the river Jombo, or Lombo, was crossed by Pedro on his return.

What has been already fully stated by Ladislaus in reference to the course of the Cassabe, first *E.N.E.*, dividing the petty kingdoms of Luvar and Catma Cabita (the Katema of Livingstone) from the great empire of Lunda or Matianvo, then in Challa, joining the Lulua or Rurua, and subsequently pursuing its way north-east to the Indian Ocean, at a point to him then unknown, has elsewhere (*Geo. Journal*, vol. xxiv.) been sufficiently adverted to. In their return journey the Arabs give us Chamopa, a great town on the

* To Sucilo Bamba, Cambambe, Camaçaca, and Mujumba Acalunga, &c. Sucilo Bamba is a different place from Great Bamba. See Pedro's route.

banks of the river Chanvoriro or Chamovizo. This is the capital of Cahinga, mentioned by Silva Porto, on the banks of the Loengue, or real Zambeze. This is also another name for their river Wumearque, which they say (No. 22, p. 240) is *above* 100 fathoms broad, and very deep; they were obliged to make a raft to cross it. It ran from north to south, and is the real Zambeze, and the Loengue of Porto. The Arabs, in their journal, mark, before entering the territory of the Muiza, Corimba, a river, which they forded (No. 13, p. 136). Gamitto, on his return, mentions Corimba (p. 390, &c.), a town on the banks of the Ruareze. At this place, he says, end the dominions of Cazembe, and those of the Movizas begin. Beyond the Ruareze also, on his return, he found most of the rivers which on the west side descend from the great Cordillera Muchinga, or Muxinga, running to the westward, tributaries certainly to the Ruareze, and next the Loengue, or true Zambeze. These facts are all of considerable importance in showing us the features of the country, and the route of the Arabs with Silva Porto.

Connected with this subject of the sources and the courses of the rivers of this portion of Africa, and the nature of the country where they spring, it may be observed here, that in Pedro Baptista's remarkable journey across the continent in 1806-1813 ('*Annaes Maritimos*,' 1843, No. 5, p. 184, and No. 7, p. 2393), he tells us that from a day's journey west of the river Cavulancango to the little river Lutipuca, travelling east, he, in that space, continued to ascend the "great mountain Cundu Irimgo," and that at the Lutipuca he reached the summit of this great range, and descended from it on the east side. This range is no doubt one of the ridges or chains of the lands which a little more to the southward divide the waters which flow south into the Zambeze (Loengue), Leambaye, and Leebea from those of the Luapula and Lualaba flowing north. An inspection of the map will show the accuracy of this delineation. With the exception of the Lutipula (7 fathoms), the Cavulancango (7 fathoms), and Luviry (12 fathoms broad), all the other streams are mere torrents, or rather rivulets.

It is obvious that high or elevated land runs westward from the great Cordillera Muchinga to the high lands nearly in the same parallel of latitude towards Lake Dililo and the sources of the Leebea, which elevated land gives birth to the rivers which run, as we perceive, in an opposite direction—some, such as the Luapula, &c., running to the north, and the others, such as the Loengue and Leambaye, running to the south and south-west. The first rain—that is, heavy rain—that Silva Porto met with was on the 25th November, south of Couxito; but the rains did not become frequent or violent till the end of December, when they became heavy, frequent, and the true tropical rains of the southern hemisphere. Ivory is very abundant in every part of the interior, and merchants come from both coasts to purchase it. Sugar-canes are found in most places, while manioc and Indian corn form the staple food of the population. Elephants are very numerous around the tanks of the Roanga, or Arroanga. The country or territory of Cangomba is very extensive, with many towns. The language spoken by the people is familiar to the two tribes of Luy and Biça, and the population is a mixture of the races of the latter countries. The country abounds with all sorts of game and domestic animals.

Going eastward from the Loengue, Silva Porto found the first culminating point on the west side of the river Bossimo, in say lat. $12^{\circ} 30'$ s., and long. $29^{\circ} 50'$ E. The second culminating point, at the summit of Mount Ueenda, is in the same parallel of south latitude, and in $31^{\circ} 30'$ E. long. The view, he says, from the top of this mountain was, as has already been adverted to, most splendid and magnificent. Gamitto says the same of the higher summit of the Sierra Muchingo, or, as Lacerda called it, Antonina. The scenery on every hand was grand and magnificent beyond description. To the north-west the view was bounded

only by the horizon, extending into the lower ranges to the plains of Cazembe, where the courses of the rivers were marked by the fringes of trees around their borders, which appeared at the distance as if diminished to brushwood. This range stands most majestic, and as if isolated from all others; and Gamitto adds, that all the other high ridges and chains in all that portion of Africa are only dwarfs when compared to it. The ascent from either the east or the west side is extremely difficult and precipitous. Between the east and west culminating points there is a distance of about 16 to 20 miles of undulating land. Its highest summit is in 12° s. lat., and $31^{\circ} 30'$ E. long., probably a few miles north of Silva Porto's true route.

This great chain is in its highest point covered with clouds, but no snow or ice is found on it. It is thickly covered with splendid trees of various tropical descriptions, some of them of a peculiar kind, and in the higher levels with trees and foliage of the temperate latitudes. Numerous rivers rise in the chain, and flow from it in every direction, to the west, to the south, and to the east, and some northerly, bending their courses afterwards to the south-eastward and south-westward. The chain stretches southward towards the Zumbo, and beyond it westward to a great distance, and northward toward the sources of the Arroango and the Zambeze, connecting itself with the lower ridges or sierras which extend northward and north-westward in Cazembe. About 60 miles north-west of Muio Achinto, a range of hills running east to west rises 2600 to 3000 feet above the level of the plains (Gamitto). Lacerda tells us these hills are steep and rugged. Towards Lucenda, at a distance of 20 or 30 miles, lesser hills, running north and south (Gamitto), spread over the country. In former times the valleys of this range were thickly inhabited by the Biças or Muizas, which tribe, once numerous, have been fearfully cut off and scattered by their terrible enemies the Arundas, the conquerors of Cazembe and all the more northern portions of this division of Africa. The Biça or Muiza country extends fifteen days' journey from east to west, and as many from north to south, the boundary on the latter side being in about 13° s. lat. To the west they join with the country or people of Lubar. The country on the south-east of Sierra Muchingo belongs to the Chevas; and here begins the kingdom or state of Cunda, and to the north-west the country is now included in the dominions of Cazembe. The Muizas trade with the tribe of Ambos or Arambus, who dwell to the north of Zumbo.

In reference to the immediate state and capital of Yanvo, Graça tells us that the climate is hot but healthy. The land is composed of vast and rich plains, producing all tropical fruits and trees, and amongst other things sugar-canes in great abundance. In the province of Challa the country is mountainous, and much like the country around Ambaca and Gologo Alto, and equally healthy and fruitful. The land is pretty well cultivated. Tropical provisions are abundant. The water is excellent. The rivers abound in excellent fish, which form a considerable portion of the food of the people. The capital is large; the streets wide, running at right angles, and kept very clean and orderly, under the surveillance of an active and well-ordered police. They have spacious markets. The king's palace is a large square enclosure in the centre of the town. Here he keeps a harem of 570 women. The prospect of the country in every direction is magnificent and enchanting. In the capital, and around it, the traveller approaches and sees signs of considerable advances in civilization. All would be most agreeable could the mind only shake itself clear of the thought of the despotism of the government, and the severity of their laws. These, amongst the people who inhabit all this portion of Africa, are written in blood. Punishments are all very cruel, human sacrifices are very frequent, and vast numbers of people are thus immolated. The position of this important place, the capital of Cazembe, and the course of the river, near which it stands, are of much consequence, as, these deter-

mined, it enables us to fix with some degree of accuracy other portions of the interior of Southern Africa (tropical). From what has already been said (see Paper, Journ. R. G. S., vol. for 1856), the true position of Lucenda, the capital of Cazembe, was not materially wrong, and may safely be taken to be $8^{\circ} 16' \text{ s. lat.}$, and $28^{\circ} 29' \text{ e. long.}$ The lake mentioned by Pereira is about 50 miles s.s.e. of the capital; of its existence there can be no doubt. Pereira crossed it, and waded through it during the greatest part of a day's march. Lacerda saw it at a little distance to the west of his route. Gamitto crossed it in his advance to Lucenda. Each of these travellers was marching in a northerly direction, say north-west. Pereira says that it has two outlets, the one running to the river Morusuro, and the other to the river which he supposed was the New Zambeze, but which was in reality the river Luapula. After crossing the lake, he at some distance came to the river Murusuro, or Luapula, down which he descended during three days and three nights in a canoe (sleeping each night ashore), till he reached the capital of Cazembe. Here we have an invincible fact as to the northerly course of the river. Pedro Baptista says he crossed the Luapula to the south of Lucenda, there above 50 fathoms broad, and *descending* with it, the sun in his march being (that is, the rising sun, or east) on his right hand. Gamitto mentions the river as being three days' journey distant from Lucenda, in a north-east direction, and that the small streams near the capital, and the outlet of Lake Mofo, run north-west to the river. There can, therefore, be no doubt that the river Luapula runs to the north and north-east, and Pedro tells us that all the rivers that he crossed in his march eastward to Cazembe, from the Murucurixy, ran to join it—the Luvirey (12 fathoms broad), the Carulencange (8 fathoms), and the Lutipuca (8 fathoms), with their numerous smaller tributaries. All the latter, and indeed all the other streams to the eastward of the Lualaba, were rivulets or brooks. The magnitude of all these streams marks the dividing ridge or watershed as lying to the south, and at no great distance. The time when Pedro crossed was in October, the dry season. In short, all these travellers considered that the Luapula was the head-waters of the Xire or Chire, which after all may be the fact.

Much confusion has been produced in African geography by the course which he gave to the Zambeze when he first reached it, namely, that it was contrary to the course of the Zambeze of Tete. So it apparently was, because at that place it ran, as Gamitto tells us, to the westward, or w.s.w.; but it does not follow from this that it joined the Luapula. He tells us (Pereira) that his New Zambeze runs from the right hand of those who go from Tete to Cazembe; and so Lacerda and Gamitto found it. These few clear and explicit facts attended to determine clearly the early course of this great and remarkable river.

In reference to the empire of Monomatapa, or more correctly Chedim, Gamitto tells us (p. 429) that it is of great extent, beginning on the south side of the Zambeze, a little above Tete, and stretching westward beyond Zumbo. It is divided into several districts or provinces. The same traveller tells us (p. 421) that the river Chire is the same as the Nhanja; thus, when alluding to the course of the Chire, he says, "the Chire or Nhanja." He also tells us (p. 402) that the Sierra Muchingo traverses an immense extent of the interior, generally in the direction of north and south. A little to the eastward of the main ridge, he informs us, is situated the town of Chinto Capinda, not far from a small lake. This is probably the place mentioned by Silva Porto, and which belongs to the Biças or Muizas.
